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# CO-ORDINATION OF LATIN WITH THE OTHER SUBJECTS OF THE HIGH-SCHOOL CURRICULUM

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## I. THE GENERAL PROBLEM OF CO-ORDINATION

What proportion of the Latin pupils in our secondary schools make conscious, tangible use of their Latin in mastering the details and solving the problems of the other secondary subjects? What proportion in their daily experience actually realize from their knowledge of Latin the practical value which we theoretically ascribe to it and which is essentially inherent in it? How many carry bodily over into their study of German, French, history, etc., the material and methods already acquired through the study of Latin and equally valid for the new subjects?

Our textbooks, it is fair to assume, represent in general our distribution of emphasis. They exist because they fit the demand. Judging from them we should be safe in concluding that each day's lesson in Latin is packed away in an air-tight compartment, not to be opened until the hour of the Latin recitation again arrives. An examination of the first-year books and of succeeding texts reveals no recognition on the part of their authors that the pupils are studying or are ever likely to study any other subject. But definite material is as indispensable here as in any other phase of the work. The effective co-ordination, the close interweaving of one subject of the curriculum with the others, involves an intimate knowledge of all intersections, of all points of contact, of all common areas. Even in the comparatively familiar sphere of a particular subject we deem it necessary to provide textbooks containing the definite material to be covered. When a knowledge of other and less familiar subjects is required how can we expect the teacher to possess it, to recognize points of contact, to give each new fact in Latin its widest possible application, and to use to the fullest extent facts already acquired elsewhere, unless material is provided as definite as the facts of the particular subject? However much

individual teachers feel the need of co-ordination, however much in conferences and conventions teachers are urged in general terms to co-ordinate Latin and English, mathematics and science, history and Latin, chemistry and biology, mathematics and commercial work, etc., the practical realization of that ideal is impossible until we have books that are written with that point of view cogently in mind and until they incorporate exact information as to what the applications are and where they should be made. At present whatever is done in that field is wholly haphazard and the results are just as unsatisfactory as if we should provide an inexperienced teacher in Latin with no more definite material than the injunction to teach the pupils whatever Latin happened to occur to her.

It may be answered that this is just the problem left for the pupil to solve, that he should be thrown on his own resources, required to work out his own salvation, to develop initiative, etc. The fallacy of this argument can be shown very briefly. In this field, which I have termed *practical* to distinguish it from the *disciplinary* and *cultural* aspects of Latin, the work consists, in the first place, of the mastery of the facts and, in the second, of the co-ordination of these facts with previous, contemporaneous, and subsequent subjects of the curriculum. It will be granted that, as application is always a higher activity than acquisition, so here the mastery of the facts is much more tangible, and therefore much easier than the co-ordination of these facts. Yet no one would leave the pupil "to his own resources" in the acquisition of facts. No one, to "develop initiative," would indicate to pupils the work to be covered during the term and tell them to report at the beginning of the next term with the assigned work completed. Yet we might have better hopes of a satisfactory result here than in the case of the infinitely more difficult problem of co-ordination. I must dwell on this point, for it is the crux of the whole question. We lead pupils carefully by the hand across all the shallow ditches and at the same time tell them to swim the deep rivers for themselves. We are anxious for every minute of the daily period for drill on the "essentials," we view with righteous alarm any inroads into the number or length of recitations that reduce the time we deem necessary for proper emphasis upon the facts, with a sublime faith

that the powers of the pupil, about which we are so skeptical in the more simple task, are at the same time by some miraculous process automatically expanding to meet the demands of the infinitely more delicate problems involved in the co-ordination of these facts with the other phases of his intellectual life.

I emphatically approve the most insistent drill on the paradigms and the development of initiative. I simply desire to analyze and emphasize the absurdity of the present division of labor by which we do everything possible for the pupil, often too much, doubtless, in the easier field and leave him wholly unaided in the more difficult. The facts of the language require drill, but they also afford plenty of opportunity for the development of individual initiative. So, likewise, the problem of co-ordination, while it undoubtedly gives excellent play for the expansion of the pupil's own powers, yet requires for its mastery just as much insistent drill as do the declensions and conjugations. The two processes and drill in the two processes should go hand in hand.

Is this neglect due, in part at least, to a more or less unconscious realization of our own insecurity when we go beyond the bounds of the facts prescribed for the year? The facts of syntax, form, vocabulary are fully in the possession of the teacher and insistence upon their indispensable character is correspondingly easy. Is it barely possible that our knowledge of what lies outside of that well-defined circle, even though it be in direct contact with it, is such that we have unconsciously attributed to a purely imaginary, but comforting, pedagogical principle what is really due to our own limited horizon?

The present deplorable situation is, however, mainly due to the very existence of the departmental system itself. With the consequent tendency to devote one's energy to the thorough mastery of a particular subject has come a corresponding tendency to ignore the broader aspects of the subject and to confine more and more the scope of the Latin work. Some means must be devised by which all the advantages of possessing a corps of specially trained Latin teachers can be preserved without incurring the evils which such a system tends inevitably to produce.

Another element which fosters this isolation is the present

tendency to change the curriculum of the high school at frequent intervals. It will readily be granted that no curriculum is sacred, that there must and should be constant progress and readjustment, but in our present random efforts to hit by chance upon one that meets the needs of our civilization, at least time enough between changes should elapse to allow this principle to be worked out and the advantages of any new rearrangement brought out to the fullest extent of which they are capable through an effective co-ordination. On the other hand the failure of the various subjects to correct their present isolation and to make definite efforts toward moulding themselves into one homogeneous structure is responsible in great measure for the slight respect in which any curriculum is held by those in authority and for much ill-advised tinkering with curricula. One of the most valuable methods of determining educational values and of settling scientifically the curriculum of the future would be to determine to what extent Latin, for example, enters into the structure of the present curriculum. The purpose of these papers is not to defend the position of Latin in the curriculum, but, if it were, no more convincing method could be devised than to analyze and realize to the utmost its inherent capacity for service.

But is the teaching of other subjects exempt from these criticisms? By no manner of means. We may examine representative textbooks of modern languages, of science, of history, etc., without finding any of them availing themselves of the fact that a large percentage of the pupils have already, for example, had two or three years of Latin. In short, I believe that our secondary schools of today have carefully nurtured a naturally existing tendency to follow the line of least resistance till it has become the most conspicuous evil in the administration of the secondary curriculum, the *compartmental* departmental system; a system by which the various subjects in high school are pursued without interrelation or interdependence, each within its own carefully restricted and circumscribed boundaries, each subject careful not to encroach upon its neighbors and correspondingly apprehensive of any similar invasion from without. We have adopted "aldermanic courtesy" with a vengeance.

The evils of such a system are very serious. We maintain that our secondary education is to prepare as effectively as possible for life, that it should furnish the material both of *knowledge* and of *power* upon which the pupils will draw to solve the problems of life. But how can we rationally expect that pupils will suddenly find themselves possessed of that faculty, when they leave high school, if we have not made very sure that they were possessed of it before leaving? In fact, we are carefully leaving out the one element which would convert our physical mixture into a chemical compound. We must train the pupil in selection and co-ordination with the problems of his contemporary intellectual life while he is in high school, if we expect him to show this capacity thereafter.

Furthermore, our present methods are deplorably *wasteful* in repeatedly requiring pupils to learn the same thing twice. In grammar, for example, after having mastered a syntactical problem in one class, a pupil is often confronted with the same problem in another language class in such a different guise that he not only does not get the larger conception of unity and coherence, but he actually learns the same thing again with just that much absolute *waste* of time and energy. Pupils will find difficulty in mastering a new technical term in physics, when a question from the instructor as to derivation would have both saved considerable time and given again the vision of the close interdependence of the work of the high school. Even in such restricted areas as spelling, if Latin teachers were working consciously and with definite material, labor would be saved and the pupil trained in the application of his newly acquired facts. If our chemistry teachers were thoroughly informed of the chemical problems arising in earlier biological courses, stepping-stones of great value would disclose themselves. Similar illustrations could be multiplied indefinitely.

A very interesting illustration of the extremes to which our present policy of isolation may go, when we shift from our shoulders the burden of everything except the details of our own subject, is seen in the burden laid exclusively upon our English departments of teaching pupils to speak and write English correctly. There is an unquestionable need of a special department to introduce pupils into English literature and cultivate real appreciation. But as a

vehicle for developing correct habits of written and oral speech it is a most curious anomaly. Consider what it implies. In a country where practically all recitations are conducted in English, at a period when the keeping of notebooks is an indispensable adjunct of all history, science, and often language classes, we must admit we have so neglected the pupil's English that we have been obliged to create a special agency to remedy our defect. And the very creation of this agency, while remedying somewhat the immediate evil, has aggravated the underlying weakness. It has relieved teachers still more of any feeling of responsibility and obscured still more the obligation resting upon every recitation, translation, description of an experiment, or historical discussion to contribute to the pupil's power over English; secondly, it has cultivated the notion among pupils that it is only in English that themes need be properly punctuated and words correctly spelled, and this in turn has made it still more difficult for teachers of other subjects to have their demand for correctness regarded as anything but an unwarranted invasion of the pupil's rights; thirdly, it has created an artificial demarcation between writing for sense and writing for form.<sup>1</sup>

Will it be necessary to institute a department of co-ordination whose function shall be to identify identical things, relate related topics, and connect naturally co-ordinated studies?

Another illustration of this tendency toward *isolation* is found in two extremely valuable books recently published: Mr. Lodge's *Vocabulary of High School Latin* and Mr. Byrne's *The Syntax of High School Latin*. Both books supply Latin teachers with material sorely needed, the lack of which has made much of our work haphazard. But the very definiteness of the results will, if these books are not carefully used, constitute a serious obstacle to co-ordination. Mr. Lodge undertook the work solely from the Latin standpoint and he cannot be fairly criticized for not attempting more. But he should, I think, have made clear the limitations

<sup>1</sup>How far we have drifted from our moorings can hardly be better illustrated than by a remark recently made by a speaker before the Modern Language section of the New York State Teachers Association. Someone had ventured to suggest that the translations ought to be in good English, whereupon the speaker retorted, "Why should we bother about the kind of English they use? The English people don't do anything for us."

of his work. For the definite value assigned to each word on the basis of its frequency in high-school Latin and the creation of a canon of 2,000 words is subject to very considerable adjustment when the importance of the Latin vocabulary is estimated on the basis of its value to other subjects in the curriculum.

So Mr. Byrne in his chapter on "Distribution of Syntax through the Course of Study" should have printed the reservation that the tables represent the relative values of constructions viewed solely from the Latin standpoint and that they will be subject to considerable modification when the importance of Latin as the foundation for other language-work is taken into consideration.

These two books should be in the hands of every Latin teacher; but they should be used to broaden and not to restrict the services of Latin in the other subjects.

This condition of *isolation* is surely not the ideal one. We should be aiming to give the pupil an education consisting not in isolated and detached fragments, but in one coherent, perfectly blended, and interrelated whole. How shall we attain that ideal? We must first demolish the artificial departmental barriers that are operating so viciously in forcing each subject to stay in its own groove. We must come to a practical realization that each subject has value in proportion as it comes in contact with the other subjects in the curriculum. We must attain such breadth of view and *esprit de corps* in our high schools that it shall not only be permissible but incumbent upon the head of the commercial department to inquire into and make *definite* suggestions as to the work of first- and second-year Latin. The science teacher must be ready, not in any apologetic attitude, but as an integral and inevitable part of his work, to make *definite* suggestions to the mathematics department as to the desired emphasis upon certain problems. The history teacher must inform the Caesar and Cicero teachers what historical facts connected with those years would be of most importance to emphasize from the general historical standpoint. The Latin teachers must equip the German teachers with the exact grammatical territory covered the first year and the German teachers should build *consciously* upon that foundation. The teachers of one department must be as willing and anxious to hear



of deficiencies shown by pupils in another department in topics for which the first department is responsible as when a defect becomes apparent in a class of the same department. In brief, the object of our present necessary specialization by departments should be the same as in any other field of legitimate specialization, namely, to bring the results of that division of labor to bear upon still larger problems and not to confine them to the limits with which they started.

This general attitude once assumed, definite knowledge and tangible material for classroom use becomes necessary. Of all the details covered in any given term, those should receive the utmost emphasis which are to be or have been of use elsewhere, with exact indication of just where this elsewhere lies. This last point should be insisted upon just as persistently as any series of forms or grammatical principles. For we are aiming not merely to save time but to develop the habit of co-ordination to such a point of efficiency that it becomes second nature for the pupil to seek constantly to apply elsewhere his newly acquired knowledge, to expect to be held responsible in every class for what he has learned in any other, and instinctively to identify apparently new phenomena with previous experiences. If this co-ordination is reciprocal, if all departments are giving expression to a keenly realized solidarity, not only shall we attain the ideal of unity for which we are striving, but we can make a very appreciable gain in the actual ground covered.

For several years past the departments of Latin and English in the East High School of Rochester, N.Y., have been co-ordinating their work. Later the movement included the modern languages, and now systematic efforts are being made to co-ordinate on the basis of exact information practically all the departments of the high school. With the assistance of my colleagues in the East High School I shall take up one field at a time and describe the results of our labors. The next article will deal with language co-ordination.